

OCT 5 1990

Mr. Dennis E. Lloyd
Pipeline Safety, Utilities Division
Arizona Corporation Division
402 West Congress Street
Tucson, AZ 85701

Dear Mr. Lloyd:

This responds to your letter dated March 12, 1990, in which you requested interpretations about several questions on the welding procedure qualification requirements of §192.225. In both situations, the operator has adopted API 1104 for welding procedure qualification.

Situation 1.

The written welding procedure involves a butt weld using pipe [outside] diameter range 2-3/8 to 12-3/4 inches and wall thickness range 3/16 to 1/2 inch. The operator selected a 4-inch diameter pipe to make the test joint.

We presume that the test pipe was 4-inch nominal pipe size (NPS) and, therefore, 4-1/2 inches in outside diameter. We also presume that the wall thickness of the test joint was within the wall thickness range of the procedure.

Question 1.

Given these facts, what is the minimum number and type of tests required to qualify this procedure?

Response:

Since the operator has elected to qualify welding procedures in accordance with API 1104, all of the requirements of Section 2 apply. Specifically, Paragraph 2.6.1 requires, for suggested diameter and thickness ranges, that the minimum number of test specimens and the tests to which they shall be subjected are as given in Table 2. The pipe diameter range and wall thickness range in the situation described are within the suggested groupings referenced in Paragraph 2.3.2.3 and described in Paragraphs 3.2.2.d and 3.2.2.e. Based on Table 2, the minimum number of tests is two nick-break tests and two root bend tests.

Situation 2.

A written welding procedure with the diameter range 2-3/8 to 4-1/2 inches and a wall thickness range 3/16 to 1/2 inch has been qualified by destructive test in accordance with API 1104. The test section was taken from a joint on 4-inch diameter pipe. The operator qualified the procedure by conducting two nick break and two root bend tests.

We presume that the test pipe was 4-inch NPS and, therefore, 4-1/2 inches in outside diameter, that the wall thickness of the test joint was within the wall thickness range of the procedure, and that the procedure qualification weld was a butt weld.

Question 2-1.

May the operator change the diameter range from 2-3/8 to 4-1/2 inches to a range 2-3/8 to 12-3/4 inches?

Response:

Paragraph 2.4.1 permits changes in the procedure other than those given in Paragraph 2.4.2 without the need for requalification, provided that the procedure specification is revised to show the changes. Because the change in the procedure is only to extend the diameter range within the range suggested in Paragraph 3.2.2.d, the operator may change the procedure without requalification.

Question 2-2.

Is the revised procedure qualified?

Response:

As explained in the response to Question 2-1, the procedure is qualified provided that the procedure specification is revised to show the change.

Question 2-3.

Is the operator required to conduct additional destructive tests?

Response:

Because the change to the procedure does not involve an essential variable listed in Paragraph 2.4.2, the operator is not required to conduct additional destructive tests.

If you have any questions about this response, please contact G. Joseph Wolf of this office at (202) 366-4560.

Sincerely,

George W. Tenley, Jr.
Director, Office of Pipeline Safety